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Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	)	
	)	
Amendment of Section 73.606(b),	)	MM Docket No. 93-142
Table of Allotments, TV	)	RM-8208

I. BACKGROUND

KNTV, Inc., a wholly owned subsidiary of Granite, is the licensee of Station KNTV(TV) (the "Station" or "KNTV"), San Jose, California. Granite and KNTV, Inc., originally petitioned the Commission on February 18, 1993, to institute a rule making proceeding to amend Section 73.606(b) of the Commission's Rules, 47 C.F.R. § 73.606(b) (1992), to delete the vacant Channel 11 allotment at Willits or, in the alternative, substitute a UHF channel therefor. Granite and KNTV, Inc., sought this amendment in order to relocate KNTV's transmitter to a site less vulnerable to severe seismic activity than its current site on

The Opposing Licensees argue against the deletion of the Channel 11 allotment at Willits on several grounds. According to the Opposing Licensees, Granite and KNTV, Inc. have not provided a compelling reason to delete Channel

KNTV, Inc., have shown in their Comments that no detriment to the public will result from such action because the Willits allotment is technically defective. Based on the information contained in the Comments filed by Granite and KNTV, Inc., it is clear that the proposed deletion is in the public interest.

A. Granite and KNTV, Inc., Have Shown That the Channel 11 Willits Allotment Cannot Be Used to Provide Adequate Coverage to Its Intended Service Area

Granite and KNTV, Inc., have demonstrated that it is infeasible to further site restrict the Channel 11 allotment at Willits and that there is no site which meets the Commission's minimum distance separation requirements from which line-of-sight coverage of the town of Willits can be achieved.2/ Moreover, the rugged terrain within the Grade B contour of the Willits allotment precludes adequate coverage of other population centers within the intended service area. See Engineering Statement of Richard L. Biby, attached as Exhibit E. Indeed, the engineering exhibit filed with the Commission by the Sauros supports this conclusion. See Sauros Comments, Exhibit E-1 at 2. Thus, Granite and KNTV, Inc., submit that the serious coverage deficiencies of a Channel 11 operation at Willits, combined with the impossibility of finding a non-short-spaced site for KNTV,3/ constitutes compelling evidence that the deletion of the allotment is in the public interest.4/ In short, the efforts of the Opposing Licensees and the Sauros to preserve the Channel 11 Willits allotment are fundamentally misguided.5/

2/ The location for a transmitter site for a Willits Channel 11 operation is restricted by KNTV's present transmitter site at San Jose and the present transmitter site authorized for Channel 11 at Reno, Nevada

3/ See infra pp. 6-7.

4/ The fact that Willits may be underserved is irrelevant here, because the Channel 11 allotment will not provide adequate coverage to Willits. Moreover, contrary to the claim of Group W, see Group W Comments at 3, alternative channels will be available to this community.

5/ Granite and KNTV, Inc., do not here question the bona fides of the Sauros' intention to apply for the Channel 11 license at Willits. Nonetheless, given the serious deficiencies of the allotment, the wisdom of this intention and economic viability of such a plan must be questioned. Moreover, it should be pointed out that the Sauros have provided no information as to their plans for a station.

B. **Granite and KNTV, Inc., Have Demonstrated That There Are No Non-Short-Spaced Sites From Which KNTV Could Achieve Adequate Coverage of Its City of License and Service Area**

The Opposing Licensees claim that KNTV's transmitter could be relocated to sites that would not be short-spaced to Willits. In particular, they suggest that KNTV could transmit from Station KSBW(TV)'s site, which lies to the southeast of Loma Prieta. It is curious that the Opposing Licensees suggest moving station KNTV(TV) to the KSBW site even though no suggestion is made that such a move would in any way decrease the earthquake hazard. In fact, however, a move to any site to the southeast would result in a degradation of KNTV's coverage of San Jose. As the complete series of profiles attached hereto as Exhibit E show, the terrain obstructions into densely populated portions of metropolitan San Jose from the Station KSBW(TV) site are actually greater than those from Loma Prieta, which themselves are significant. Thus, the Opposing Licensees' argument that the KNTV transmitter could be relocated to a non-short-spaced site is fundamentally flawed. To move so far south as the KSBW transmitter site would cause a substantial portion of the population of the San Jose metropolitan area to be in the shadow of the Santa Cruz Mountains and foothills instead of in the line-of-site of KNTV's transmitter. See Exhibit E.

C. **Granite and KNTV, Inc., Have Identified A Number of Possible Alternative Transmitter Sites That Are Likely to Be Seismically More Stable Than KNTV's Current Site**

Contrary to the assertions of the Opposing Licensees, Granite and KNTV, Inc., have identified several possible alternative transmitter sites for KNTV that, based on the seismic evidence, are likely to be less likely to suffer severe earthquakes than Loma Prieta. See Granite's and KNTV, Inc.'s Comments at

seismically unstable but are located at least 25 miles from the nearest edge of the San Francisco Peninsula region referenced by the Opposing Licensees. As discussed in Granite's and KNTV, Inc.'s Comments, the possible alternative sites for KNTV are located in the Santa Cruz mountains south of San Jose, approximately 3.5 to 5.5 miles north and northwest of Loma Prieta.

Moreover, the statement of the civil engineer C.B. Crouse, which the Opposing Licensees have submitted to support their claim, does not show that the seismic evidence provided by Granite and KNTV, Inc., is erroneous. In fact, Crouse recognizes that Loma Prieta is subject to "significant seismic hazard." See Joint Engineering Exhibit, Statement of C.B. Crouse, P.E., at 5.6/ Crouse does little more than proffer the irrelevant conclusion that peaks in the San Francisco Peninsula region, which are distant from the possible alternative sites identified by Granite for KNTV, are likely to be more hazardous than peaks on the Santa Cruz segment of the San Andreas fault.

Granite's showing with respect to the instability of KNTV's present site is not addressed or controverted by the Opposing Licensees. Thus, it is undisputed that the existing KNTV tower site is located atop the Sargent fault, which is a part of the Sargent-Berrocal fault system, believed by some experts to have the potential to generate a 7.4 Richter quake.7/ It also is uncontroverted that KNTV's existing site is approximately two miles from the San Andreas fault and to the epicenter of the 1989 quake. Finally, the Opposing Licensees do not attempt to refute recorded data reported in official

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6/ In fact, Mr. Crouse acknowledges that "the primary surficial trace of this fault...passes within approximately one-half kilometer of the tower facility." The KNTV tower, then, is slightly more than one-quarter mile from the primary surficial fault trace of the Sargent fault. Id. at 3. Nowhere, however, does Mr. Crouse address (i) the potential for or the probability of a major seismic event on the Sargent-Berrocal fault system, which is identified in the literature as being 7.4 Richter; (ii) the potential for ground shaking at the site that would be associated with a 7.4 event; or (iii) the relationship between the Sargent-Berrocal fault system and the San Andreas fault system.

7/ While Mr. Crouse's claim that the 1989 Loma Prieta earthquake released stress on the Santa Cruz Mountain segment of the San Andreas fault, he conveniently ignores the subject of stresses on the Sargent fault or the potential for a major seismic event on the Sargent fault or the Sargent-Berrocal fault system.

publications of the State of California cited by Granite indicating that, as a general rule, seismic ground accelerations tend to be greater closer to the epicenter of a seismic event. 8/

III. THE OPPOSING LICENSEES' SUGGESTION THAT KNTV SHOULD STRUCTURALLY ALTER ITS TOWER IS IRRELEVANT AND WITHOUT FOUNDATION, AND THEIR IMPLICATION THAT THE PRESENT KNTV TOWER SITE IS SAFE IS FALSE

The Opposing Licensees assert that Granite and KNTV, Inc., could make KNTV's tower less vulnerable to earthquake damage by making structural alterations to the tower. See Joint Engineering Exhibit, Statement of Madison L. Patt, P.E. Considerable discussion of various tower design considerations is

engineering measures for nearly any seismic risk and any type of facility, it is a well-accepted, virtually uncontested principle of facility sitting for purposes of seismic security that, first, a seismically safe -- or at least a seismically preferred -- site should be selected, and then, second, seismic design and engineering principles should be brought to bear to try to achieve the desired levels of seismic risk and security, and tolerance to interruption and costs of repair or replacement.9/ Granite's business judgment is that it should find a seismically more secure site than the present Loma Prieta Peak site, which sits atop the Sargent Fault and close to the San Andreas Fault. It is presumptuous for the Opposing Licensees to attempt to substitute their business judgment for that of Granite and KNTV, Inc. Any undertaking to structurally alter the tower at Loma Prieta is purely a business decision to be made by Granite and KNTV, Inc., and the other user of the tower. The Opposing Licensees have no standing or right to dictate Granite's actions and behavior with respect to the possible alteration of KNTV's existing tower.10/

Mr. Batt goes on to speculate that the reason the KNTV tower and antenna suffered structural damage was because the tower base was bolted directly to its concrete foundation rather than having a pinned base. Id. at ¶ 20. Mr. Batt, however, acknowledges that he does not know whether the tower was designed for the bending moments associated with its fixity, and thus he does not know whether modification to a pinned base, or to a tapered bottom section with a pin at the base, would be feasible. Id. Therefore, no basis has been supplied by the Opposing Licensees for their assertion that KNTV's concerns can be addressed "easily and economically" by mere modification of the tower at the existing site.

9/ Design criteria that should be applied to a replacement antenna also are discussed by Mr. Batts. Id. at ¶ 18. Again, any replacement antenna, whatever its seismic design and engineering specifications, should, first, be sited at a seismically safer location, as Granite believes one or more of its specific proposed alternatives may provide to be, rather than at Loma Prieta Peak, and should thereafter, second, be designed to meet the lower anticipated future earthquake loads at the alternative site.

10/ Other decisionmakers, including the owners of transmission facilities also located on Loma Prieta Peak, may be prepared to accommodate higher risk and

The Opposing Licensees attempt to belittle the hazards facing KNTV(TV) at its present site by minimizing the damage caused to the KNTV tower. Thus, Mr. Batt claims that such damage was "limited to the top of the tower and the top-mounted antenna" and that "[c]onsidering the proximity to the earthquake epicenter, the damage was minor compared to the damage sustained to building structures as far away as San Francisco." Id. at ¶¶ 12 and 18.11/ Such a claim is irrelevant to this proceeding and, in any event, is not shared by Granite and KNTV, Inc.12/ Granite and KNTV, Inc. are grateful that KNTV's transmission tower was not completely destroyed. Nevertheless, Station KNTV(TV) was knocked off-the-air for a significant period of time, and the costs of tower repair were significant. Granite's fundamental objective is to avoid further interruptions and costs in the future. This objective can best be accomplished by applying prudence and accepted sitting principles, to relocate KNTV's antenna to one of the possible alternative sites to avoid any repeat of the 1989 occurrence.

IV. CONCLUSION

As discussed above, Granite and KNTV, Inc., have fully satisfied the Commission's request for information demonstrating the necessity of its proposed deletion of the vacant Channel 11 allotment at Willits. In addition, Granite and KNTV, Inc., have shown that the Channel 11 allotment at Willits is fundamentally defective and cannot be used to provide adequate television service to its intended city of license and service area. Moreover, none of the parties that have filed Comments in this proceeding have provided competent information to

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11/ Mr. Batt's assertion that KNTV's tower "should last at least 30 more years" apparently is based on an assumption that the tower was designed for the proper wind loading. Id. at ¶ 17. Mr. Batt, however, questions the validity of this assumption by stating "[t]he damage sustained to the tower and to the top-mounted antenna demonstrates that the wind design criteria for the design of the antenna may have been less than what is recommended today." Id. at ¶ 16. By his own choice of words, Mr. Batt's statements are conjecture only.

12/ While Granite acknowledges that damage to various facilities occurred in the 1989 quake at distances farther from the epicenter of the quake than KNTV's tower, there are many different explanations for each such occurrence, including, among others, local geologic conditions, modes of transmission of seismic acceleration waves, and the seismic engineering, if any, at each facility.

refute Granite's showing or have provided any compelling reasons why the Commission's deletion of the Channel 11 Willits allotment would be contrary to public interest.

For the foregoing reasons, Granite and KNTV, Inc., submit that the Commission should adopt its proposal to delete the Channel 11 allotment at Willits.

Respectfully Submitted,

GRANITE BROADCASTING CORPORATION
KNTV, INC.

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Its Attorneys

Dated: August 3, 1993

Exhibit E

Engineering Statement in Re:

Reply Comments on an Amendment to Section 73.606(b)

Deletion of Ch. 11 at Willits, California

RM-8208 - MM Docket 93-142

Prepared on Behalf of

Granite Broadcasting Corporation and KNTV, Inc.

Introduction

Granite Broadcasting Corporation ("Granite") seeks to delete the vacant, flawed allotment, of Television Channel 11 to Willits, California or to replace Ch. 11 with one of many alternative UHF channels. Granite has determined that the deletion of Channel 11 at Willits is unavoidably necessary in order to relocate KNTV, Channel 11 at San Jose away from Loma Prieta Peak.

Substantive engineering data has been submitted by Granite to demonstrate that the allotment of Channel 11 at Willits should be reconsidered because there is no fully-spaced site with line-of-sight into Willits. Therefore, an increased site restriction on Ch. 11 at Willits would not be a valid solution in this instance.

Analysis of William H. and Ronna L. Sauros' Stated Intent to Apply for Authority to Construct Ch. 11 at Willits, CA

With its Comments, Granite submitted detailed information illustrating that an application to serve Ch. 11 at Willits would not survive a challenge to compliance with one of the most essential of the Commission's requirements for a prospective Television Facility, Section 73.685(b) - "[A transmitter location] should be chosen so that line-of-sight can be obtained from the antenna over the principal community to be served; in no event should there be a major obstruction in this path."

William H. Sauro and Ronna L. Sauro, through their Comments ("Sauro Comments") in the instant matter (MM Docket No. 93-142, RM-8208, dated July 19, 1993), have indicated their intent to file an application for Ch. 11 at Willits once the advanced television system ("ATV") freeze is removed.

The organization of the engineering statement, attached to Sauro Comments, is impeccable and the factual data contained therein are generally correct. The conclusions set forth by

where several streams converge. Much higher, very rugged terrain surrounds the town on all sides. Indeed, the built-up area of Willits seems to have been largely constrained by the rough terrain that surrounds it. By the use of terrain data profiles, both Granite and Sauro provide conclusive evidence that the only possible locations from which to provide unobstructed line-of-sight transmission paths to all of Willits are immediately proximate to the town.

By happenstance, Granite's need to re-locate KNTV has lead to the discovery of the flawed nature of the Ch. 11 allotment at Willits. Even were Granite, for some unforeseen reason, unable to move KNTV from its present transmitter location, the Willits allotment is, and always has been patently flawed, and should be deleted. It is in the public interest to negate any and all such defective proposals, in order that the overall utilization of the electromagnetic spectrum can be maximized.

Interestingly, the narrative portion of Sauro Comments creates the impression that the Sauros and their consulting engineer are not aware that the reference site for the Ch. 11 allotment at Willits cannot provide unobstructed line-of-sight transmission paths to the community of Willits. At Page 2 of Sauro Comments Exhibit E-1, Engineering Statement, beginning with fourth full paragraph:

> "In order to fulfill the principal community service requirements of §73.685(a) and (b), a transmitter site must be situated within close proximity to Willits. For this reason, the imposition of a site restriction on the Channel 11 allotment at Willits is not a viable solution to KNTV's problem."

Section 73.685(b) of the FCC Rules, as cited above by Sauro and quoted above in the instant engineering statement, addresses the necessity that the transmitter site must provide clear, unobstructed line-of-site paths to the principal community to be served. For some reason, be it innocent ignorance or selective, purposeful omission, Sauro does not admit to the fact that the Ch. 11 allotment at Willits has, since its inception, had such a

severe site constraint as to make line-of-sight coverage of Willits impossible. (See Granite Comments.)

This curiously naive perspective continues in the final two paragraphs on Page 2 of Sauro Comments:

> "Furthermore, Mendocino County is made up of small, isolated communities within the Coast Ranges of mountains. Television service to these secluded communities is very important both from community service and commercial viability standpoints. Propagation characteristics of the television signal through (sic) this rugged terrain will play an important role in the success of a television station at Willits.
>
> VHF Channel 11, operating over a frequency band from 198 through 204 MHz, has superior propagation characteristics over rugged terrain to UHF channels which start at 470 MHz. Furthermore, it is considerably more economical to operate a VHF high-band television station with an effective radiated power ("ERP") of 316 kW than to operate a UHF station at 5,000 kW. This aspect is important to a station serving a small isolated market such as Willits."

Granite has no problem with Sauros' assertion of fact in the above-quoted two paragraphs. However, as Granite has demonstrated in the instant proceeding, and as supported by the terrain data contained in Sauro Comments, the terrain in the vicinity of Willits is so rugged that it and not the power/height combination of the transmission facility effectively limits station coverage. Thus, it is totally specious to compare the operating costs of a VHF facility with a maximum legally permissible UHF facility. The use of a 5,000 kW transmission facility at Willits would be an irrational misuse of resources, given the severe constraints that the terrain places there upon the coverage of <u>any</u> television station, be it VHF or UHF.

Additionally, Sauro appears to be completely oblivious to the fact that the "superior propagation characteristics over rugged terrain" of Ch. 11 as compared with UHF channels would almost certainly create disastrously bad reflections ("ghosts") off the higher terrain that surrounds Willits. Sauro correctly asserts that VHF signals bend (i.e., refract) more easily over obstructions than do UHF signals. However, even if the Willits Ch. 11 allotment were to be operated from a site that is not

presently short-spaced, the higher terrain that surrounds Willits would be strongly illuminated, while the community itself would receive much weaker signals because of the intervening terrain. The effect of weakened direct signals, immersed in a sea of strong, incoherent reflections, amounts to a recipe for commercial disaster.

In sum, the allotment of Ch. 11 at Willits is flawed and has been since it was first proposed. A small community, however deserving of additional television service, should not be burdened with the poor service that would result from the eventual implementation of Ch. 11 with its current restrictions.

KBHK, KGO, KTVU, and KPIX ("H&E Group") Complaints

The Comments of KBHK, KGO, KTVU, and KPIX rely heavily upon a statement prepared by the consulting engineering firm, Hammett &

H&E Group falsely rephrases Granite's basis for the petition to include a need to relocate to the San Francisco Peninsula. In the instant rulemaking, Granite has not articulated a desire or need to relocate so far north as to end up on the San Francisco Peninsula. The San Francisco Peninsula commences and extends northwards from the swampish, southern head of the San Francisco Bay, near Palo Alto and Menlo Park, more than 40 kilometers north and west of Granite's proposed alternative sites.

It is also important to correct H&E Group's characterization that Granite asserts that the deletion of Ch. 11 will be in the public interest because it is unavailable for filing due to the ATV freeze. It is in the public interest to delete Ch. 11 at Willits because existing site restrictions make it impossible to adequately serve the Willits community. It is therefore in the public interest to replace Ch. 11 at Willits with a tentative UHF channel conditional on the specific usage of ATV channels in the surrounding areas, with such minimal site restrictions that a site might look directly into the city, pursuant to Section 73.685 of the Commission's rules.

H&E Group's reference to the use of Ch. 11 as an ATV channel is unclear and peculiarly out of place as it makes no sense. No one, most of all Granite, has suggested that VHF-TV Channel 11 be used as an ATV channel in San Francisco.

Alternative Non-Short-Spaced, or Less Short-Spaced Sites for KNTV

H&E Group alleges that there is a large area in which KNTV might relocate and meet all existing minimum distance separation requirements. This may be true, however, as Granite has conclusively shown in the Petition, Comments, and the instant Reply, all points south are unsuitable because of substantially worsened service into San Jose. H&E Group is wrong when they suggest that there is some point to the south without significant terrain obstruction from which KNTV might serve San Jose. (H&E Group's stations, or at least the majority, serve this shadowed

portion of San Jose from their farther sites without the hindrances of terrain obstruction from the Santa Cruz Mountains.)

[redacted]

along the paths from H&E Group's suggested alternative transmitter site.

Exhibit E-2a is a map illustrating a similar set of radials

when this map was prepared, what area this map actually covers, what the black stippling or dotting represents, or which of the nine propagation modes were used in this application of TIREM. Not one fragment of proof is offered regarding the performance of the TIREM model in this electromagnetic environment (or in any other environment, for that matter).

In the case at hand, the KSBW (Channel 8) signal could easily have been measured and used as a sensibility check on TIREM's predictions. Instead, H&E Group only offers (at footnote 2, Page 4 of Joint Engineering Statement, TV Stations KPIX , KGO-TV, and KBHK-TV, San Francisco, California, Engineering Exhibit in Support of Comments to MM Docket 93-142, dated July 16, 1993) the bland assurance that

> "[t]he TIREM model is the most accurate available means of predicting signal strength when details of terrain along the propagation path are known."

The statement, quoted directly above, is offered with absolutely no proof of its validity and without even an assertion of competence to make such a statement. As such, it has no justifiable place in either an FCC proceeding or in the H&E Group exhibit.

Drawbacks of TIREM

The TIREM model does not consider the excess path losses that are caused by urban clutter and vegetation. An estimate of urban clutter losses at Channel 11 can be obtained from Figure 2. "Median value of environmental clutter effect as a function of angle of elevation." ("Radio Propagation in Urban Areas", by A.G. Longley, U.S. Department of Commerce OT Report 78-144, April, 1978.), attached hereto as Exhibit E-5. Based on that source, the excess path loss due to building clutter in cities such as San Jose can be estimated to be at least 12 deciBels ("dB") and as much as 19 dB, depending on the extent of urbanization. Stated in terms of power ratio, building and vegetation clutter effects in the San Jose urbanized area effectively reduce the received signal power by at least 16:1 and possibly by as much as about 80:1. It

is clearly incorrect to base conclusions regarding received signal strength in urbanized areas, such as San Jose, on computational procedures that do not take urban clutter into account.

The behaviour of the TIREM model (and several other models) is examined at length in Part V of "IEEE Transactions on Vehicular Technology", "Coverage Prediction for Mobile Radio Systems Operating in the 800/900 MHz Frequency Range", Volume 37, No. 1,

KNTV must move off of Loma Prieta while maintaining or improving its service into the San Jose Metropolitan Community and while maintaining service to Salinas, Seaside and Monterey.

The Channel 11 allotment at Willits is the sole restriction which prevents any relocation to a more suitable site.

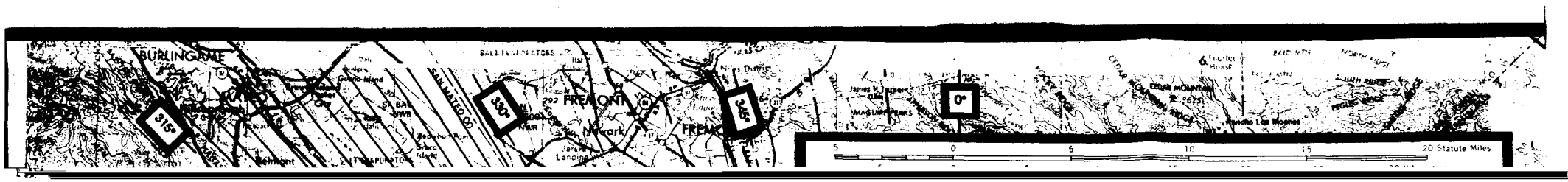
The Commission's action allotting Channel 11 to Willits should be reconsidered with this rulemaking to prevent futile attempts to implement a television facility which will not have line-of-sight into the principal community of license.

Certification

All calculations, graphs, contours, and other technical data prepared on behalf of Granite Broadcasting Corporation and KNTV have been determined in accordance with the existing Rules and Regulations of the Federal Communications Commission. Under penalty of perjury, I state that the foregoing is true and correct to the best of my knowledge and belief.

Richard L. Biby

Richard L. Biby
Registered Professional Engineer
District of Columbia Reg. No. 5710E
Commonwealth of Virginia Reg. No. 014018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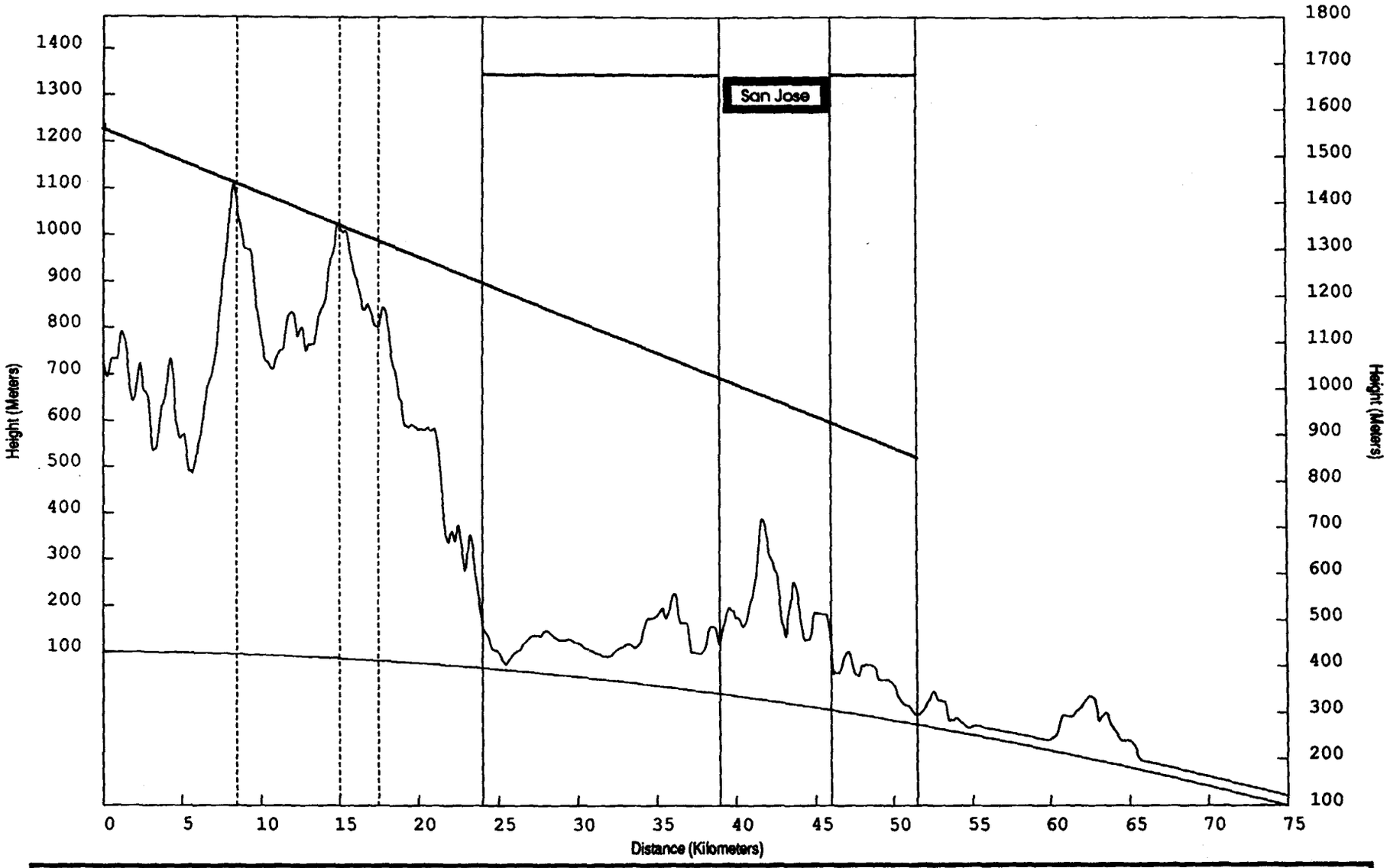
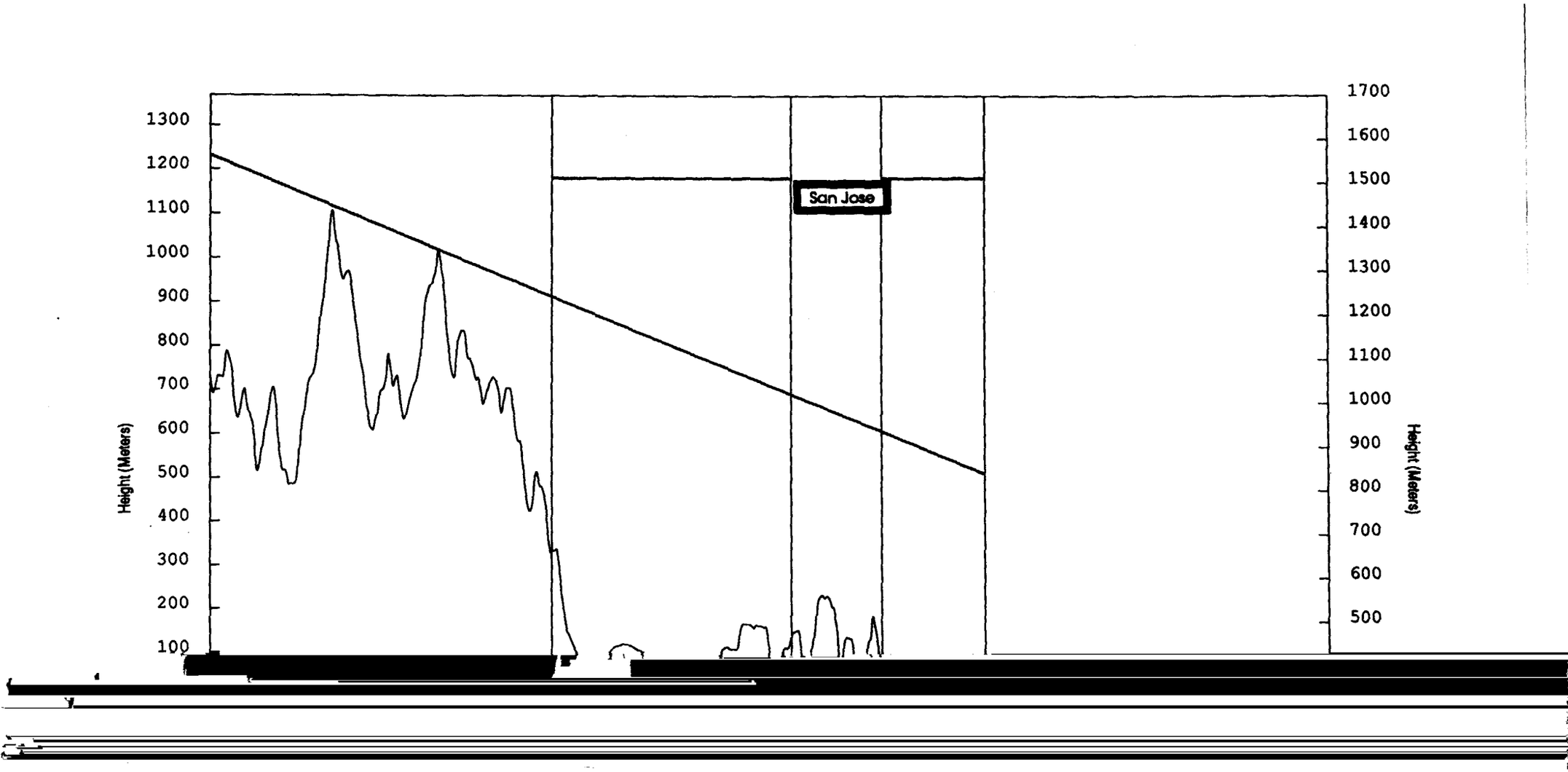


E-1b N 315° E • Profile From KSBW Site into San Jose • N 37° 03' 30" W 121° 46' 33" 1227m AMSL

Richard L. Biby Communications Engineering Services, P.C. Falls Church, VA August 1993


San Jose
Height (Meters)
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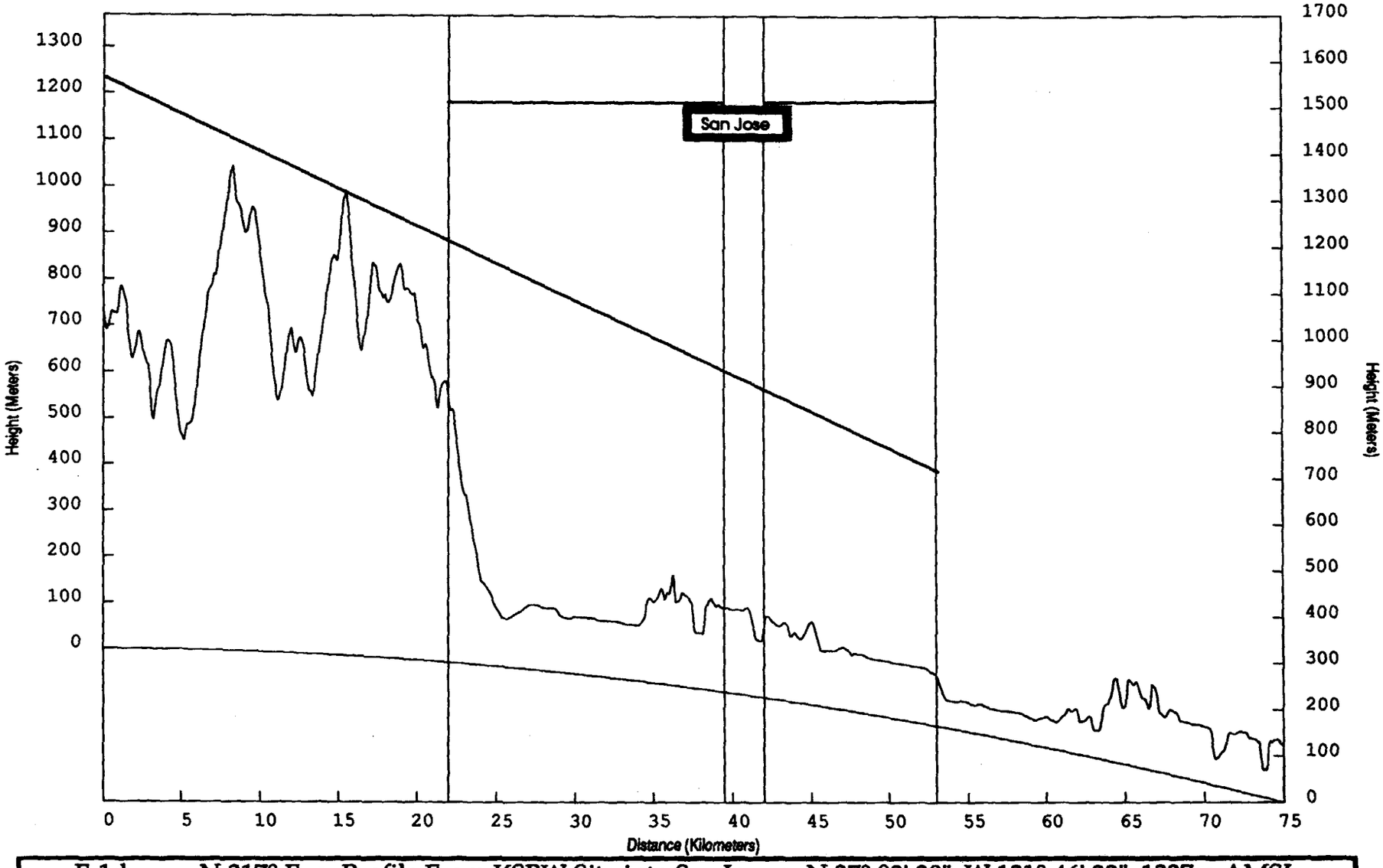

E-1d N 317° E • Profile From KSBW Site into San Jose • N 37° 03' 30" W 121° 46' 33" 1227m AMSL

Richard L. Biby Communications Engineering Services, P.C. Falls Church, VA August1993